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January 19, 1995

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M St., N.W., Room 222
Washington, D.C. 20554

Re: Ex Parte
PR Docket No. 93-61 - Automatic Vehicle Monitoring

Dear Mr. Caton:

On behalf of Pinpoint Communications, Inc., this is to set the record straight with respect to Southwestern Bell's mischaracterization of Pinpoint's December 29, 1994, *ex parte* presentation.¹ Southwestern Bell's latest attack on Pinpoint boils down to one issue: competition. Even assuming that the Southwestern Bell system is as capable as Southwestern Bell claims, the Pinpoint system can still perform over five times as many locations per second as the Southwestern Bell system in the same amount of spectrum. It is no wonder that Southwestern Bell seeks to have the Commission adopt a regulatory framework designed to preclude Pinpoint.

Pinpoint favors an allocation that will provide opportunities for entrepreneurs and technology developers to share spectrum in the 902 - 928 MHz band. Southwestern Bell, having imported its technology from Quicktrak of Australia, seeks exclusivity on the basis of 2 MHz wide channel blocks to be auctioned. Under either the plan it has urged upon the Commission or under the rumored plan of 5.75, 2.0, and 5.5 MHz blocks, Southwestern Bell would be in a position to foreclose or impede entry by Pinpoint and other entrepreneurial companies that have developed technology capable of operating in a shared environment.

¹ Letter of December 29, 1994, to Mr. William F. Caton from Edward A. Yorkgitis, Jr., and David E. Hilliard, Counsel for Pinpoint Communications, Inc.

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The Commission need not shut the door on technological innovation by domestic companies like Pinpoint and others. Southwestern Bell ignores the fact that two of the five wide-area system proponents in this proceeding -- Pinpoint and Uniplex -- have said that they could time share an 8 MHz channel.² If some proponents require exclusivity, the Commission should auction spectrum for such use. Those who can share, however, should not be forced into an artificial mutual exclusivity. Instead, one sub-band should be made available for sharing.

Time Sharing Can Work. The record to which Southwestern Bell alludes reflects that three of the five system proponents do not want to time share, not that they cannot time share. There is a big difference between such positions -- a difference that should not be masked in rhetoric. Southwestern Bell accuses Pinpoint of wanting to foreclose two systems -- Southwestern Bell's and MobileVision. The assertion is plainly incorrect. Pinpoint stands ready to time share with both of these other proponents. Moreover, under Pinpoint's recommendation, any proponent requiring exclusivity would have full opportunity to obtain such a right at auction of some of the wide-area spectrum. Southwestern Bell, on the other hand, stands only too ready to foreclose Pinpoint, Uniplex, or any other would-be entrant so as to limit access to spectrum through auction of all wide-area AVM spectrum.

Pinpoint's Technology. No other system proponent has been as open as Pinpoint as to its technology. Pinpoint's Washington, D.C., experimental system has been available for others to examine and to use in a mutual effort to achieve compatibility. Thus far, only Amtech has worked with Pinpoint in this manner. Those efforts, however, have proven that sharing based on height and power differentials and near-far effects is feasible between local-area and wide-area systems. The same system could be used in order to work through any problems that might arise in implementing time-sharing schemes among wide-area systems.

Southwestern Bell would also have the Commission disallow Pinpoint's wideband forward link in a further effort to eliminate Pinpoint as a potential competitor. Pinpoint's wideband forward link and its willingness to share, however, fit perfectly with the rules under which Pinpoint obtained its licenses -- licenses that were not sought in any effort to warehouse. Unlike others, Pinpoint sought licenses for only those cities it sought to serve during the first phase of its commercial deployment and then only for the initial sites in those cities. Moreover, Pinpoint has made clear that it can share spectrum. As such, there was no issue of warehousing.

² Letters from McNeil Bryan, President, Uniplex Corporation, to Wm. F. Caton, Acting Secretary, FCC, dated September 30, 1994, and December 28, 1994.

Capacity Counts. In an effort to obfuscate the realities of their system's lower capacity, Southwestern Bell takes issue with Pinpoint's discussion of the Quicktrak system's capacity in the context of how time sharing might work. Capacity has very real operational and public interest ramifications as Southwestern Bell's attempted defense shows. However, Southwestern Bell, at bottom, merely confirms Pinpoint's arguments as to Pinpoint's superior performance. In an 8 MHz wide system and without resorting to frequency reuse, Pinpoint can perform 1,500 vehicle locations per second on an individually addressed basis. In a group poll in which individual addressing is not required, the rate doubles to 3,000. Thus, the Pinpoint system can perform from 5,400,000 to 10,800,000 vehicle locations per hour. This capacity facilitates shared operation and will support a variety of Intelligent Transportation System functions. Southwestern Bell has now claimed that it can perform "nearly one-quarter million [250,000] locations per hour in just two megahertz bandwidth." This sounds like a large number until it is analyzed.

Taking Southwestern Bell's claim at face value, this is approximately 69 locations per second in 2 MHz. Operation of four such systems over 8 MHz would yield 276 locations per second. Even comparing this figure to Pinpoint's performance for individually addressed location polls shows that Pinpoint can perform more than five times as many as Southwestern Bell's imported technology with the latter using 8 MHz.

The capacity differences among systems are significant from a competitive standpoint. Proponents of lower capacity systems are naturally less willing to share spectrum because in times of peak traffic on all systems, their inherently lower capacity designs may make them less competitive. Systems with a capacity advantage are also likely to have a cost advantage that will benefit the consumer. Greater capacity also improves performance by reducing the time required to provide service in either a shared or an exclusive environment. Consequently, it is not surprising that Southwestern Bell seeks to preclude Pinpoint by urging the Commission to adopt a bandplan in which Pinpoint would have to outbid Southwestern Bell and the contender for the adjacent 5.5 MHz block.

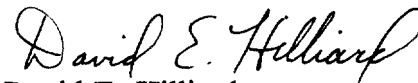
Apart from competition, capacity also counts in terms of service to the public. The operational differences can be profound. For example, Pinpoint could obtain position fixes of a 600-vehicle police fleet in approximately 1/5 of one second using group addressing. Southwestern Bell, assuming it has achieved the capacity it now claims, would take nearly 9 seconds. While the positions obtained from the Pinpoint ARRAY™ system would all be almost simultaneous, there would be enough delay in the locations obtained from the Southwestern Bell system for the first vehicles and the last vehicles in the fleet that, effectively, an *additional* position error of as much as 400

Mr. William F. Caton
January 19, 1995
Page 4

feet would be introduced for the first few vehicles to be located.³ The difference can easily translate to vehicles being on different streets from where they were first assumed to be -- a difference that can mean life or death in emergency situations.

Grandfathering Consistent with its aim of foreclosing competition from shared spectrum systems, Southwestern Bell would have the Commission refrain from grandfathering any system not constructed by the release of the Report and Order in this proceeding. Southwestern Bell is only too willing to have the Commission send the message that those U.S. companies that have poured millions into the development of technology consistent with the Commission's Rules and who have refrained from warehousing spectrum by creating systems that can share, and thus need not be mutually exclusive, should be denied an opportunity to provide service under their licenses. Aside from the insupportable legal position of invoking a revocation of license under the guise of a "modification," Southwestern Bell would have the Commission send the message to those it regulates that they should not invest in the development of technology consistent with the Commission's Rules. Meaningful grandfathering provisions consistent with the current rules are needed if the Commission is to reach a decision in this proceeding that avoids having the effect of precluding technology development while maintaining a sense of fairness in its processes.

Respectfully,



David E. Hilliard
Edward A. Yorkgitis, Jr.
Counsel for Pinpoint
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cc: Attached list

³ The example assumes an average speed of 30 miles per hour (44 feet per second) for the police vehicles during the 9-second period.

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